

long, densely fulvous-tomentose and scattered long-villous; sympodia similar to the peduncles, greatly elongated, 4.5--7.5 cm. long, with a pair of foliaceous bracts at each node; bracts green, elliptic, about 1 cm. long and 5 mm. wide, rather densely fulvous-pubescent on both surfaces, short-stipitate, acute at the apex; heads sessile, 3-flowered; involucre bracts 3, narrow-elliptic, 10--14 mm. long, 4 mm. wide, obtuse or subacute at the apex, very densely white-tomentose above, very densely fulvous-villous beneath; calyx campanulate, 3--4 mm. long, very densely fulvous-villous with long forward-pointing and very conspicuous hairs; corolla undeveloped.

The type of this very distinct species was collected by Joseph Francis Charles Rock (no. 1677) -- in whose honor it is named -- between Ta Kaw and Meh Soi, Thailand, on January 4, 1922, and is deposited in the herbarium of the University of California at Berkeley.

-----

ADDITIONAL NOTES ON THE GENUS AEGIPHILA. XVI

Harold N. Moldenke

AEGIPHILA Jacq.

Additional literature: Aristeguieta, Clave & Descrip. Fam. Arb. Venez. 192, 193, 230, & 277. 1954; A. R. Schultz, Inst. Tec. Rio Grande do Sul Pub. 30: 15. 1960; Rambo, Pesquisas 4: 18. 1960; Angely, Liv. Gen. Bot. Bras. 35 & 37. 1960; Moldenke, Phytologia 7: 451--464 & 467--506. 1961.

Vernacular names recorded by Aristeguieta for members of this genus in Venezuela are "chicharro" and "yuco blanco".

An additional excluded species is: Aegiphila martiana Schau. ex Moldenke, Alph. List Cit. 2: 445, sphalm. 1948 = Petrea martiana Schau.

AEGIPHILA ACULEIFERA Moldenke

Austin Smith adds the following notes about this species: tree with base 1 m. wide; limbs long, lateral; bark dark-brown; leaves membranous, rather fleshy, dark-green, shining, very glabrous, the venation reticulated, the midrib light-green; buds round or flat-topped, pure white; calyx and ovary pale-green; pedicels darker green; petals opening flat or slightly reflexed, 8 mm. long, pure white; stamens and pistil long-exserted. He says that it is a showy tree when in bloom, inhabiting wet loam soil in semi-shade of the subtropical zone.

Additional citations: COSTA RICA: Alajuela: A. Smith P.2035 (Ca--12690).

AEGIPHILA AUSTRALIS Moldenke

Additional literature: A. R. Schultz, Inst. Tec. Rio Grande

do Sul Pub. 30: 15. 1960.

Schultz, in the reference cited above, reduces this species with a question to A. integrifolia (Jacq.) Jacks.

**AEGIPHILA BOGOTENSIS** (Spreng.) Moldenke

Additional citations: ECUADOR: Tunguragua: Asplund 7980 (S).

**AEGIPHILA BRACHIATA** Vell.

Additional synonymy: Aegiphila branchiata Vell. apud A. R. Schultz, Inst. Tec. Rio Grande do Sul Pub. 30: 15, sphalm. 1960.

Additional literature: Rambo, Pesquisas 4: 18. 1960; A. R. Schultz, Inst. Tec. Rio Grande do Sul Pub. 30: 15. 1960; Moldenke, Phytologia 7: 459. 1961; Angely, Fl. Paran. 17: 46. 1961.

**AEGIPHILA CANDELABRUM** Briq.

Additional citations: PARAGUAY: Woolston 844 (Ca—86405).

**AEGIPHILA CORDATA** Poepp.

Woytkowski describes this species as a tree 12 meters tall, with yellow-green flowers in September, and says that it is rare in forests at 1000 meters altitude.

Additional citations: PERU: Junin: Woytkowski 5977 (Z).

**AEGIPHILA COSTARICENSIS** Moldenke

Additional citations: MEXICO: Chiapas: Matuda 2101 (Ca—913674).

**AEGIPHILA CRENATA** Moldenke

Additional literature: Angely, Fl. Paran. 17: 46. 1961; Moldenke, Phytologia 7: 464. 1961.

**AEGIPHILA FLUMINENSIS** Vell.

Additional literature: Angely, Fl. Paran. 17: 46. 1961; Moldenke, Phytologia 7: 472. 1961.

**AEGIPHILA HASSLERI** Briq.

Additional literature: Angely, Fl. Paran. 17: 46. 1961; Moldenke, Phytologia 7: 476—477. 1961.

**AEGIPHILA LHOTZKIANA** Cham.

Additional literature: Angely, Fl. Paran. 17: 46. 1961; Moldenke, Phytologia 7: 484. 1961.

**AEGIPHILA MEMBRANACEA** Turcz.

Steyermark & Nilsson describe this plant as a vine, with chartaceous leaves, the peduncles, pedicels, and calyx pale-green, the corolla pale-yellow, the style whitish, and the two stigmas (=style-branches) yellow-white. They found it on a wooded ridge, at 1220 meters altitude, blooming in April.

Additional citations: VENEZUELA: Bolívar: Steyermark & Nilsson 193 (Z).

**AEGIPHILA OBDUCTA** Vell.

Additional literature: Angely, Fl. Paran. 17: 46. 1961; Moldenke, Phytologia 7: 492. 1961.

**AEGIPHILA PARAGUARIENSIS** Briq.

Additional literature: Angely, Fl. Paran. 17: 46. 1961; Moldenke, Phytologia 7: 494--495. 1961.

**AEGIPHILA SELLOWIANA** Cham.

Additional literature: Angely, Fl. Paran. 17: 46. 1961; Moldenke, Phytologia 7: 501--502. 1961.

**AEGIPHILA TRUNCATA** Moldenke

Additional literature: Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 59 & 175. 1949; Moldenke, Phytologia 4: 415. 1953; Moldenke, Résumé 65 & 442. 1959; Moldenke, Phytologia 7: 506. 1961.

Metcalf & Cuatrecasas report that this species is a tree 30 m. tall, the fruits green with brown spots in February, found at altitudes of 240 to 260 meters.

Additional citations: COLOMBIA: Antioquia: Metcalf & Cuatrecasas 30072 (Ca--687224).

**AEGIPHILA UMBRACULIFORMIS** Moldenke

Literature: Moldenke, Phytologia 5: 225. 1955; Moldenke, Biol. Abstr. 30: 4394. 1958; Moldenke, Résumé 82 & 442. 1959.

Ferreyra describes the flowers of this plant as purple outside, pinkish-white within.

Citations: PERU: Huánuco: Ferreyra 2190 (W--2026718); Stork & Horton 9495 (Ca--647102--type).

**AEGIPHILA UNIFLORA** Urb.

Literature: Urb., Symb. Ant. 3: 365--366. 1903; J. A. Clark, Card. Ind. Gray Herb. 1903; Prain, Ind. Kew. Suppl. 3: 4. 1908; Moldenke, Brittonia 1: 254, 264, 360--362, & 473. 1934; Moldenke, Phytologia 1: 271--272. 1937; Moldenke, Geogr. Distrib. Avicenn. 6. 1939; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 1], 25 & 85. 1942; Moldenke, Alph. List Cit. 1: 258 & 303. 1946; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 46 & 175. 1949; Moldenke, Résumé 54 & 442. 1959.

**AEGIPHILA VALERII** Standl.

Additional and emended literature: Moldenke, Brittonia 1: 252, 258, 263, 289--292, & 476. 1934; Moldenke, Geogr. Distrib. Avicenn. 13 & 17. 1939; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 1], 15, 22, & 85. 1942; Moldenke, Alph. List Cit. 1: 325 & 326 (1946) and 2: 344. 1948; H. N. & A. L. Moldenke, Pl. Life 2: 87. 1948; Moldenke, Alph. List Cit. 3: 714, 715, & 962 (1949) and 4: 1051--1053 & 1082. 1949; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 28, 39, & 175. 1949; Moldenke, Phytologia 4: 415. 1953; Moldenke, Résumé 34, 46, & 442. 1959.

Illustrations: Moldenke, Phytologia 2: 443, fig. 5. 1948.

Additional citations: MEXICO: Chiapas: Matuda 4876 (W--

2087069).

**AEGIPHILA VALLENSIS** Moldenke

Additional literature: Moldenke, *Alph. List Cit.* 4: 1214. 1949; Moldenke, *Known Geogr. Distrib. Verbenac.*, [ed. 2], 59 & 175. 1949; Moldenke, *Phytologia* 4: 415. 1953; Moldenke, *Résumé* 65 & 442. 1959.

**AEGIPHILA VELUTINOSA** Moldenke

Literature: J. A. Clark, *Card Ind. Gray Herb.* 1932; Moldenke, *Brittonia* 1: 194 (1932) and 1: 280, 403, 426, 437--438, & 472. 1934; Moldenke, *Phytologia* 1: 272. 1937; Moldenke, *Geogr. Distrib. Avicenn.* 23. 1939; Moldenke, *Known Geogr. Distrib. Verbenac.*, [ed. 1], 34 & 85. 1942; Moldenke, *Alph. List Cit.* 1: 122 (1946) and 4: 1032. 1948; Moldenke, *Known Geogr. Distrib. Verbenac.*, [ed. 2], 71 & 175. 1949; Moldenke, *Résumé* 82 & 442. 1959.

**AEGIPHILA VENEZUELENSIS** Moldenke

Literature: Moldenke, *Alph. List Cit.* 2: 352 (1948) and 3: 975 & 976. 1949; Moldenke, *Known Geogr. Distrib. Verbenac.*, [ed. 2], 62 & 175. 1949; Moldenke in *Steyermark, Fieldiana* 28: 514--515. 1953; Moldenke, *Phytologia* 4: 415. 1953; *Steyermark, Fieldiana* 28: 1178. 1957; Moldenke, *Résumé* 70 & 442. 1959.

Collectors describe this plant as a shrub or slender shrub, 2.5--5 m. tall, or a small tree to 12 m. tall, the slender stem about 1 cm. in diameter, the leaves firmly membranaceous, dark- or deep-green and shiny above, paler green beneath, the stems, petioles, and peduncles appressed buff-tomentose, the rachis and pedicles gray-green, the calyx pale-green and appressed buff-tomentose, the corolla white or whitish, 9 mm. long, its lobes 4 mm. long and 2.5 mm. wide, the filaments white, the anthers buff-brown, and the fruit turning yellow. It is said to be occasional in scrub forests and quebradas, in upper mixed *Clusia-Magnolia* forests, and along streambeds, at altitudes of 1600 to 2300 meters, blooming in January, February, and June, and fruiting in December and January. It has been misidentified in herbaria as a species of *Daphnopsis*.

Additional citations: VENEZUELA: Amazonas: Cowan & Wurdack 31298 (N); Maguire, Cowan, & Wurdack 30042 (N). Bolívar: B. Maguire 32940 (N), 33014 (N); Steyermark 75664 (N), 75835 (Z); Steyermark & Wurdack 1089 (N).

**AEGIPHILA VENEZUELENSIS** var. **SERRATA** Moldenke

Literature: Moldenke, *Phytologia* 6: 323. 1958; Moldenke, *Résumé* 70 & 442. 1959.

Collectors report that this plant is a shrub with white flowers, occasional in talus forests, at altitudes of 1300 to 1500 meters, blooming in January. The type was collected in an uppermost slope forest at an elevation of 1500 to 1700 meters.

Citations: VENEZUELA: Amazonas: Maguire, Wurdack, & Bunting 36952 (N--type); Maguire, Wurdack, & Bunting 42582 (N).

## AEGIPHILA VERRUCOSA Schau.

Literature: Roem. & Schult., Syst. Veg., ed. 1, 4: 698 (1819) and ed. 2, 2: 82. 1820; Schau. in A. DC., Prodr. 11: 650. 1847; Karst., Ausw. Neu. Schön. Blüt. Gew. Venez. 31—33, pl. 10. 1848; Bocq., Adansonia 3: 188. 1862; Benth. in Benth. & Hook. f., Gen. Pl. 2: 1151. 1876; Jacks., Ind. Kew. 1: 47 & 345. 1893; Briq. in Engl. & Prantl, Nat. Pflanzenfam. 4 (3a): 166. 1895; Pittier, Pl. Usual. Venez. 416. 1926; Moldenke, Brittonia 1: 258—260, 263, 285—289, 472, 474, & 475. 1934; Moldenke, Phytologia 1: 272. 1937; Moldenke, Alph. List Common Names 8. 1939; Moldenke, Geogr. Distrib. Avicenn. 20. 1939; Moldenke, Prelim. Alph. List Invalid Names 8 & 32. 1940; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 1], 32 & 85. 1942; Moldenke, Alph. List Invalid Names 4, 7, & 33. 1942; Moldenke, Phytologia 2: 91. 1944; Moldenke, Alph. List Cit. 1: 7 & 198 (1946) and 2: 337, 580, & 603. 1948; H. N. & A. L. Moldenke, Pl. Life 2: 51. 1948; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 62 & 175. 1949; Moldenke, Alph. List Cit. 3: 694, 749, 819, & 974 (1949) and 4: 1035 & 1049. 1949; Moldenke, Résumé 65, 70, 239, 240, 319, & 442. 1959.

Illustrations: Karst., Ausw. Neu. Schön. Blüt. Gew. Venez. pl. 10. 1848.

The wood of this species is reported to be white, and the species is said to grow at 2400 meters altitude. It has been misidentified in herbaria as Metteniusa sp.

Additional citations: VENEZUELA: Mérida: Bernardi 6087 (N).

## AEGIPHILA VERTICILLATA Vell.

Additional synonymy: Aegiphila veryicillata Vell. ex Moldenke, Alph. List Cit. 1: 171, sphalm (1946) and 3: 670, sphalm. 1949.

Additional and emended literature: Jacks., Ind. Kew. 1: 47. 1893; Moldenke, Brittonia 1: 252, 266, 267, 284, 297, 300, 329—331, 334, 344—346, & 472—477. 1934; Moldenke, Geogr. Distrib. Avicenn. 25 & 28. 1939; Moldenke, Prelim. Alph. List Invalid Names 2—4. 1940; Moldenke, Suppl. List Invalid Names 3. 1941; Moldenke, Alph. List Invalid Names 2, 3, & 24. 1942; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 1], 36, 40, & 85. 1942; Moldenke, Alph. List Cit. 1: 56, 78, 90, 94, 106, 107, 121, 127, 170—172, 177, 231, 237, 250, 265, 289, 318, & 326 (1946), 2: 328, 329, 331, 337, 343, 362, 364, 365, 367, 370, 433, 435, 534, 535, 551, 553, 598, & 933 (1948), 3: 663, 670, 674, 675, 690, 692, 710, 711, 751, 814, 816, 838, 844—846, 855, 856, 858, 890, 915, 921, & 922 (1949), and 4: 1046, 1058, 1081, 1087, 1106, 1123, 1124, & 1301. 1949; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 75, 98, & 175. 1949; Moldenke, Phytologia 4: 434. 1953; Moldenke, Résumé 86, 115, 229, 231, 284, & 442. 1959; Angely, Ind. Ang. 10. 1959; Rennó, Levant. Herb. Inst. Agron. Minas 149. 1960; Angely, Fl. Paran. 16: 36. 1960.

Additional citations: BRAZIL: Minas Gerais: Macedo 434 (S). Paraná: Hatschbach 3757 (Z). São Paulo: Brade 13095 [Herb.

Jard. Bot. Rio Jan. 29513] (B).

*AEGIPHILA VILLOSA* (Aubl.) Gmel.

Additional and emended literature: Jacks., Ind. Kew. 1: 47 (1893) and 2: 160. 1894; Moldenke, Brittonia 1: 259, 260, 268, 280, 339, 342--345, & 474--476. 1934; Moldenke, Alph. List Common Names 6, 22, & 33. 1939; Moldenke, Geogr. Distrib. Avicenn. 21 & 25. 1939; Moldenke, Prelim. Alph. List Invalid Names 4 & 32. 1940; Moldenke in Pulle, Fl. Surin. 4 (2): 304. 1940; Moldenke, Alph. List Invalid Names 3 & 33. 1942; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 1], 33, 36, & 85. 1942; Moldenke, Alph. List Cit. 1: 15, 37, 113, 114, 274, & 318 (1946), 2: 445, 582, 624, 631, & 640 (1948), 3: 655, 709, 724, 810, 825, 853, & 888 (1949), and 4: 1046 & 1097. 1949; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 65, 68, 75, & 175. 1949; H. N. & A. L. Moldenke, Anal. Inst. Biol. Mex. 20: 2. 1949; Moldenke, Phytologia 4: 431 & 435--437. 1953; Moldenke, Résumé 74, 78, 86, 231, 319, & 442. 1959.

Cowan reports that this is a tree 6 meters tall, fruiting in November, found in the primary forest at altitudes of 70 to 300 meters.

Additional citations: BRAZIL: Amapá: Cowan 38260 (N); Frões & Black 27481 (Z).

*AEGIPHILA VILLOSISSIMA* Moldenke

Literature: Moldenke, Bull. Torrey Bot. Club 60: 392. 1933; J. A. Clark, Card Ind. Gray Herb. 1933; Moldenke, Brittonia 1: 252, 254, 259, 277, 442--443, & 474. 1934; Moldenke, Phytologia 1: 296. 1938; Moldenke, Geogr. Distrib. Avicenn. 25. 1939; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 1], 36 & 85. 1942; H. N. & A. L. Moldenke, Pl. Life 2: 46. 1948; Moldenke, Alph. List Cit. 2: 621. 1948; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 75 & 175. 1949; Moldenke, Résumé 86 & 442. 1959; Angely, Ind. Ang. 10. 1959.

*AEGIPHILA VIRGATA* Turcz.

This name, accepted by me as doubtfully valid in Brittonia 1: 469 & 475 (1934), Geogr. Distrib. Avicenn. 25 (1939), and Alph. List Cit. 3: 737 (1949), has proved to belong in the synonymy of Arrabidaea corchorioides (Cham.) P. DC. in the Bignoniaceae.

*AEGIPHILA VITELLINIFLORA* Klotzsch

Additional and emended literature: Jacks., Ind. Kew. 1: 46 & 47. 1893; Moldenke, Brittonia 1: 259, 279, 421--426, 449, & 471--476. 1934; Moldenke, Alph. List Common Names 7 & 12. 1939; Moldenke, Geogr. Distrib. Avicenn. 25, 28, & 35. 1939; Moldenke, Prelim. Alph. List Invalid Names 1, 4, & 24. 1940; Moldenke, Alph. List Invalid Names 1 & 23. 1942; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 1], 36, 39, 40, 70, & 85. 1942; Moldenke, Alph. List Cit. 1: 30, 44, 54, 78, 107, 114, 135, 164, 224, 226, 236, 237, 263, 264, 284, 325, & 326 (1946), 2: 329, 331,

336, 361, 414, 432, 485, 530, & 561 (1948), 3: 684, 686, 710, 726, 736, 801, 814, 838, 856, 879, 907, 911, 920, & 922 (1949), and 4: 982, 1086, 1106, 1113, & 1254. 1949; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 75, 96, 98, 156, & 175. 1949; Moldenke, Phytologia 4: 437--438. 1953; Moldenke, Résumé 86, 113, 115, 212, 228, 231, 278, 415, & 442. 1959; Angely, Ind. Ang. 10. 1959.

Additional citations: BRAZIL: Bahia: Blanchet 904/1294 (N), 3269 (N). Pará: Murça Pires 3662 (Z).

#### AEGIPHILA WIGANDIOIDES Lundell

Additional and emended literature: Moldenke, Alph. List Cit. 3: 715. 1949; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 28 & 175. 1949; Moldenke, Phytologia 4: 438. 1953; Moldenke, Résumé 34 & 442. 1959.

Additional citations: MEXICO: Chiapas: Matuda 4253 (Mi--type, W--1891341--isotype).

### -----

#### ADDITIONAL NOTES ON THE GENUS VITEX. I

Harold N. Moldenke

These notes are supplementary to the information given in my monograph of the genus as published in preliminary form in Phytologia 5: 142--176, 186--224, 257--280, 293--336, 343--393, 404--464, & 465--507 and 6: 13--64, 70--128, 129--192, & 197--231 in the period of 1955 to 1958.

#### VITEX Tourn.

Additional synonymy: Vitee L. ex Moldenke, Alph. List Cit. 3: 849, sphalm. 1949.

Additional and emended literature: A. Cunn., Precur. no. 390. 1838; Hassk., 2e Cat. Lands Pl. Tuin Buitenz. 134--136. 1844; Walp., Repert. 4: 84--92. 1845; A. Cunn., Raoul Choix 44. 1846; Hook. f., Fl. Nov. Zel. 1: 203. 1853; Griseb., Abhand. König. Gesell. Wissen. Götting. 7: 257. 1857; Hook. f., Handb. N. Z. Fl. 223. 1864; Miq., Ann. Mus. Bot. Lugd.-Bat. 2: 99. 1865; Roxb., Fl. Ind., repr. ed. Carey, 476. 1874; F. Muell., Descr. Not. Pap. Pl. 1: 11. 1875--1876; Loret & Barrandon, Fl. Montpel. 532--533 & 918. 1876; Fern.-Vill. in Blanco, Fl. Filip., ed. 3, Nov. App. 160. 1880; Forbes, Nat. Wand. East. Arch. 514. 1885; Campbell & Watt, Descript. Cat. Econom. Prod. Chutia Nagpur 39 & 55. 1886; Moloney, Sketch Forest. W. Afr. 523 & 524. 1887; Schum. & Hollrung, Fl. Kais. Wilhelmsland 121. 1889; Durand & DeWild., Bull. Soc. Roy. Bot. Belg. Compt. Rend. 38: 133--134. 1899; Warb. in Engl., Bot. Jahrb. 13: 428. 1891; K. Schum. & Lauterb., Fl. Deutsch. Schutzgeb. Südsee 523--524. 1900; Cheesem., Man. New Zeal. Fl., ed. 1, 565. 1906; Laing & Black-